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EXAMINER

GODBOLD, DOUGLAS

ART UNIT	PAPER NUMBER
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2626

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10/30/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/782,171	Applicant(s) FEINBERG ET AL.	
	Examiner Douglas C. Godbold	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,5-7 and 11-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5-7 and 11-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This office action is in response to correspondence filed August 24, 2007 in reference to application 10/782,171. Claims 1, 5-7, and 11-16 are pending in the application and have been examined.

#### ***Response to Amendment***

2. The amendment filed August 24, 2007 has been accepted in this office action. Claims 1, 5-7, and 11-16 have been amended and claims 2-4 and 8-10 have been cancelled. The rejection of claims 7-12 under 35 U.S.C. 101 has been withdrawn.

#### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-2, 5-7 and 11-16 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 1, 5-7, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flam et al (2004/0039996) in view of Davis (The Bidirectional Algorithm).
7. Consider claim 1, Flam teaches a method of displaying a mixed language text message in a dialog box (In some preferred embodiments of the present invention, the applet running on the viewing computer generates a bi-directional window on the computer screen, in which all the characters, both Latin and in the selected non-Latin alphabet, are displayed using the appropriate alphabets and in the proper (LTR or RTL) order; paragraph 0015.), the method comprising the steps of:
- determining a reading order for a sentence of a mixed language text message to be displayed in a dialog box of a computer system user interface of a computer system operating system, the reading order being appropriate to render the sentence readable upon display thereof (To overcome this problem, mouse 25 is used to select a "switch" button 62 in window 56, which reverses the order of the Hebrew letters, as shown in FIG. 3C. Latin characters in the window are not reversed. Passage 54 is now returned to its original, intelligible form; paragraph 0062. Clearly, it is inherent that a determination of a reading order must be made, if only the Hebrew characters are being reversed.);

displaying the mixed language text message in the dialog box of the computer system user interface using the determined reading order and (To overcome this problem, mouse 25 is used to select a "switch" button 62 in window 56, which reverses the order of the Hebrew letters, as shown in FIG. 3C. Latin characters in the window are not reversed. Passage 54 is now returned to its original, intelligible form; paragraph 0062.).

This embodiment of Flam does not specifically teach determining an alignment for the mixed language text message, the alignment being appropriate to render the mixed language text message readable upon display thereof.

However, in the same field of mixed language messages Flam does teach, in the other embodiment of the invention dealing more with writing mixed language texts instead of strictly displaying, determining an alignment for the mixed language text message, the alignment being appropriate to render the mixed language text message readable upon display thereof (Assuming that Hebrew operation has been invoked (by selecting button 30), each new keystroke or key selection received by the applet causes the corresponding character to be displayed at the left of the last line appearing in window 44; paragraph 0057. Clearly if the next character is appearing to the left of the first, the text is right aligned.).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include the alignment of text as taught by the writing embodiment of Flam with the displaying method as taught by the displaying embodiment of Flam in

order to allow for the portions of each text that correspond to each language to appear in a more natural manner.

These two embodiments of Flam do not specifically teach wherein determining a reading order comprises,

evaluating successively, by the computer system, a plurality of characters comprising the mixed language text message to determine whether ones of the plurality of characters comprise one of the following: a strong character and a weak character,

determining by the computer system, the language of a first strong character in the plurality of characters encountered during the successive evaluation, and

establishing the reading order based upon a language corresponding to the first strong character.

In the same field of Bilingual texts, Davis teaches evaluating successively, by the computer system, a plurality of characters comprising the mixed language text message to determine whether ones of the plurality of characters comprise one of the following: a strong character and a weak character (The is scanned to find the first L AL or R type character; page 14; paragraph 2. These are strong character types as defined by table 3-7. In order for this determination to be made, it is inherent that each character must be determined to be one of these categories which fall into either strong or weak.),

determining by the computer system, the language of a first strong character in the plurality of characters encountered during the successive evaluation (Figure 3-7 shows which languages fall into each category of L, AL or R type characters.), and

establishing the reading order based upon a language corresponding to the first strong character (paragraph embedding level is set on the basis of whether L, AL and R is found; page 14, step P3. These embedding levels are used in determining reading order; pages 14-24.).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the strong and weak character evaluation of Davis with the system of Flam in order to provide a way of making the determinations using well know Unicode standard techniques.

8. Consider claim 5, Flam teaches the method of claim 1, wherein determining an alignment comprises determining the alignment of the language otherwise employed by the computer system user interface to display text (Assuming that Hebrew operation has been invoked (by selecting button 30), each new keystroke or key selection received by the applet causes the corresponding character to be displayed at the left of the last line appearing in window 44; paragraph 0057. Clearly if the next character is appearing to the left of the first, the text is right aligned. Although this is in the "writing" part of Flam's invention, clearly one of ordinary skill in the art could appreciate that this alignment is applicable to the display as well. Further, the invention of flam displays characters of a non-default language; paragraph 0025. This would imply that all characteristics if Hebrew is not selected would be determined by the defaults of the system.).

9. Consider claim 6, Flam teaches the method of claim 1, wherein displaying comprises overriding the reading order setting otherwise employed by the computer system user interface to display text (Preferably, displaying the characters includes translating the codes of the characters on the display so that they appear in the window in an alphabet of the non-default language. Further preferably, translating the codes of the characters includes reversing an order of the converted characters so that they appear in their correct order in the non-default language, wherein reversing the order of the characters includes reversing an order of at least some of the characters in the window responsive to an order switch invoked by a user of the computer; paragraph 0025.).

10. Consider claim 7, Flam teaches a computer readable storage medium having computer-executable instructions (codes are processed by means of an applet, paragraph 0044), therefore a computer readable medium is inherent) for displaying a mixed language text message in a dialog box (In some preferred embodiments of the present invention, the applet running on the viewing computer generates a bi-directional window on the computer screen, in which all the characters, both Latin and in the selected non-Latin alphabet, are displayed using the appropriate alphabets and in the proper (LTR or RTL) order; paragraph 0015.), the method comprising the steps of:

determining a reading order for a sentence of a mixed language text message to be displayed in a dialog box of a computer system user interface of a computer system operating system, the reading order being appropriate to render the sentence readable



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upon display thereof (To overcome this problem, mouse 25 is used to select a "switch" button 62 in window 56, which reverses the order of the Hebrew letters, as shown in FIG. 3C. Latin characters in the window are not reversed. Passage 54 is now returned to its original, intelligible form; paragraph 0062. Clearly, it is inherent that a determination of a reading order must be made, if only the Hebrew characters are being reversed.);

displaying the mixed language text message in the dialog box of the computer system user interface using the determined reading order and (To overcome this problem, mouse 25 is used to select a "switch" button 62 in window 56, which reverses the order of the Hebrew letters, as shown in FIG. 3C. Latin characters in the window are not reversed. Passage 54 is now returned to its original, intelligible form; paragraph 0062.).

This embodiment of Flam does not specifically teach determining an alignment for the mixed language text message, the alignment being appropriate to render the mixed language text message readable upon display thereof.

However, in the same field of mixed language messages Flam does teach, in the other embodiment of the invention dealing more with writing mixed language texts instead of strictly displaying, determining an alignment for the mixed language text message, the alignment being appropriate to render the mixed language text message readable upon display thereof (Assuming that Hebrew operation has been invoked (by selecting button 30), each new keystroke or key selection received by the applet causes the corresponding character to be displayed at the left of the last line appearing in

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window 44; paragraph 0057. Clearly if the next character is appearing to the left of the first, the text is right aligned.).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include the alignment of text as taught by the writing embodiment of Flam with the displaying method as taught by the displaying embodiment of Flam in order to allow for the portions of each text that correspond to each language to appear in a more natural manner.

These two embodiments of Flam do not specifically teach wherein determining a reading order comprises,

evaluating successively, by the computer system, a plurality of characters comprising the mixed language text message to determine whether ones of the plurality of characters comprise one of the following: a strong character and a weak character,

determining by the computer system, the language of a first strong character in the plurality of characters encountered during the successive evaluation, and

establishing the reading order based upon a language corresponding to the first strong character.

In the same field of Bilingual texts, Davis teaches evaluating successively, by the computer system, a plurality of characters comprising the mixed language text message to determine whether ones of the plurality of characters comprise one of the following: a strong character and a weak character (The is scanned to find the first L AL or R type character; page 14; paragraph 2. These are strong character types as defined by table

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3-7. In order for this determination to be made, it is inherent that each character must be determined to be one of these categories which fall into either strong or weak.),

determining by the computer system, the language of a first strong character in the plurality of characters encountered during the successive evaluation (Figure 3-7 shows which languages fall into each category of L, AL or R type characters.), and

establishing the reading order based upon a language corresponding to the first strong character (paragraph embedding level is set on the basis of whether L, AL and R is found; page 14, step P3. These embedding levels are used in determining reading order; pages 14-24.).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the strong and weak character evaluation of Davis with the system of Flam in order to provide a way of making the determinations using well know Unicode standard techniques.

11. Consider claim 11, Flam teaches the computer readable medium of claim 7, wherein determining an alignment comprises determining the alignment of the language otherwise employed by the computer system user interface to display text (Assuming that Hebrew operation has been invoked (by selecting button 30), each new keystroke or key selection received by the applet causes the corresponding character to be displayed at the left of the last line appearing in window 44; paragraph 0057. Clearly if the next character is appearing to the left of the first, the text is right aligned. Although this is in the "writing" part of Flam's invention, clearly one of ordinary skill in the art could

appreciate that this alignment is applicable to the display as well. Further, the invention of flam displays characters of a non-default language; paragraph 0025. This would imply that all characteristics if Hebrew is not selected would be determined by the defaults of the system.).

12. Consider claim 12, Flam teaches the computer readable medium of claim 7, wherein the step of displaying comprises a step of overriding the reading order setting otherwise employed by the computer system user interface to display text (Preferably, displaying the characters includes translating the codes of the characters on the display so that they appear in the window in an alphabet of the non-default language. Further preferably, translating the codes of the characters includes reversing an order of the converted characters so that they appear in their correct order in the non-default language, wherein reversing the order of the characters includes reversing an order of at least some of the characters in the window responsive to an order switch invoked by a user of the computer; paragraph 0025.).

13. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flam in view of Fienberg (US APA 2002/0143825) and further in view of Davis.

14. Consider claim 13, Flam teaches a method of establishing a reading order for a sentence of a mixed language text message to be displayed in a dialog box of a computer system user interface (In some preferred embodiments of the present

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invention, the applet running on the viewing computer generates a bi-directional window on the computer screen, in which all the characters, both Latin and in the selected non-Latin alphabet, are displayed using the appropriate alphabets and in the proper (LTR or RTL) order; paragraph 0015.), the method comprising:

determining the reading order of the located alphabetic character by ascertaining the language or script to which the located alphabetic character belongs (To overcome this problem, mouse 25 is used to select a "switch" button 62 in window 56, which reverses the order of the Hebrew letters, as shown in FIG. 3C. Latin characters in the window are not reversed. Passage 54 is now returned to its original, intelligible form; paragraph 0062. Clearly, it is inherent that a determination of a reading order must be made, if only the Hebrew characters are being reversed.); and,

setting the reading order of the sentence of the mixed language text message to be the reading order of the located alphabetic character (To overcome this problem, mouse 25 is used to select a "switch" button 62 in window 56, which reverses the order of the Hebrew letters, as shown in FIG. 3C. Latin characters in the window are not reversed. Passage 54 is now returned to its original, intelligible form; paragraph 0062.).

But Flam does not specifically teach examining characters of a sentence of a mixed language text message in succession in an attempt to locate an alphabetic character.

In the same field of bi-directional texts, Fienberg teaches characters of a sentence of a mixed language text message in succession in an attempt to locate an alphabetic character (figures 4a-4f show an algorithm for determining the type of each

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character in order to determine if they should be reversed, including determining alphabetic characters. Although this algorithm deals with reversing characters within a single language, the concept is still the same, as numbers are read from left to right and text is read right to left; paragraph 0032.)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the alphabetic character location of Fienberg with the bi-directional system of Flam in order to allow for locating characters that may need to be reversed for proper reading.

Flam and Fienberg do not specifically teach determining the reading order of the located alphabetic character by ascertaining by the computer system at least one of the following: a language to which the located alphabetic character belongs and a script to which the located alphabetic character belongs.

In the same field of bidirectional text, Davis teaches determining the reading order of the located alphabetic character by ascertaining by the computer system at least one of the following: a language to which the located alphabetic character belongs and a script to which the located alphabetic character belongs (The is scanned to find the first L AL or R type character; page 14; paragraph 2. These are strong character types as defined by table 3-7. In order for this determination to be made, it is inherent that each character must be determined to be one of these categories which fall into either strong or weak. Figure 3-7 shows which languages and scripts fall into each category of L, AL or R type characters. In effect by making a determination on what kind of character a character is, Davis determines script or language.).

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Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the strong and weak character evaluation of Davis with the system of Flam in order to provide a way of making the determinations using well know Unicode standard techniques.

15. Consider claim 14, Flam teaches the method of claim 13, wherein the method further comprises, in response to not locating an alphabetic character in the sentence, the steps of:

determining whether a reading order has previously been established for a paragraph in which the sentence is present (paragraph 0025 teaches reversing reading orders for characters not of a language not of the default language. Therefore a reading order would have been established for the default language, whether it be for the system or for the document.); and,

in response to determining that a reading order has previously been established for the paragraph, setting the reading order of the sentence of the mixed language text message to be the reading order of the paragraph (paragraph 0025 teaches reversing reading orders for characters not of a language not of the default language. Therefore a reading order would have been established for the default language, whether it be for the system or for the document, and would inherently be used in the case no determination of language could be made.)

16. Consider claim 15, Flam in view of Feinberg teaches the method of claim 13, wherein the method further comprises, in response to not locating an alphabetic character in the sentence, the steps of:

determining whether the sentence comprises a first sentence of the mixed language text message; and, in response to determining that the sentence comprises a first sentence of the mixed language text message, setting the reading order of the sentence of the mixed language text message to be the reading order used by an operating system program to display text in the computer system user interface (Feinberg teaches analysis of characters and strings; paragraph 0021. Flam teaches using default language settings, paragraph 0025. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use the default language settings of the system if no determination of language and reading order has already been made in a previous string in the text message.).

Consider claim 16, Flam teaches the method of claim 13, wherein the method further comprises, in response to not locating an alphabetic character in the sentence, the steps of: determining whether the sentence comprises a first sentence of the mixed language text message; and, in response to determining that the sentence does not comprise a first sentence of the mixed language text message, setting the reading order of the sentence of the mixed language text message to be the reading order of the first sentence of the mixed language text message (Paragraph 0025 teaches reversing reading orders for characters not of a language not of the default language. Therefore a



reading order would have been established for the default language, whether it be for the system or for the document, and would inherently be used in the case no determination of language could be made.)

### ***Conclusion***

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas C. Godbold whose telephone number is (571) 270-1451. The examiner can normally be reached on Monday-Thursday 7:00am-4:30pm Friday 7:00am-3:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DCG

  
PATRICK N. EDOUARD  
SUPERVISORY PATENT EXAMINER